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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/656,094

09/05/2003

Luong M. Tran

7784-000643

9923

7590

02/22/2005

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EXAMINER

MILLER, TAKISHA S

ART UNIT

PAPER NUMBER

2855

DATE MAILED: 02/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/656,094

Applicant(s)

TRAN ET AL.

Examiner

Takisha Miller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 25-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 25-31 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/5/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-24, drawn to an apparatus to determine a cracking angle of a specimen, classified in class 73, subclass 799.
 - II. Claims 25-31, drawn to a method of determining an embrittlement potential, classified in class 73, subclass 809.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions of Group I and Group II are related as process and apparatus for its practice.

The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the process as claimed can be practiced by another materially different apparatus or by hand.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

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5. During a telephone conversation with Mark Elchuk on 2/18/05 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-24. Affirmation of this election must be made by applicant in replying to this Office action. Claims 25-31 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Drawings

7. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the position sensor (cls. 1, 9, 10, 24); force sensor (cls. 3, 4, 21, 22, 24) and an angle sensor (cl.20) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the

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drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-7,9 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Ooenoki et al. (5,483,750)(hereinafter Ooenoki).

a. With respect to claim 1, Ooenoki teaches an apparatus comprising a movable chuck (12) operably movable relative to a fixed chuck (11) in a selected path and according to a selected characteristic (Col. 6, lines 18-21), a bending module (18) operable to move said movable chuck (12) in the selected path, a position sensor (14) to sense the position of said movable chuck (12) relative to said fixed chuck (11)(Col. 6, lines 23-25) and a control module (17) operably controlling said bending module (18)(Col. 6, lines 31-36)(Fig.1).

- b. With respect to claim 2, Ooenoki teaches an apparatus wherein said selected path allows said movable chuck (12) to bend the selected test component (13) relative to said fixed chuck (11) in a plurality of angles (Col. 6, lines 21-23)(Fig. 1).
- c. With respect to claim 3, Ooenoki teaches an apparatus further comprising a force sensor (16) to sense a selected force relative to at least one of said movable chuck (12) and said fixed chuck (11)(Col. 6, lines 27-29)(Fig. 1).
- d. With respect to claim 4, Ooenoki teaches an apparatus wherein said force includes a pressure (Col. 6, lines 27-29)(Col. 13, lines 3-5).
- e. With respect to claims 5 and 6, Ooenoki teaches an apparatus wherein said selected characteristic includes a bend speed, wherein said control module (17) selectively controls said movable chuck (12) to move at a selected rate/very slow speed (Col. 6, lines 46-47).
- f. With respect to claim 7, Ooenoki teaches an apparatus wherein said control module (17) controls said bending module (18) by providing a signal to said bending module (18) to move said movable chuck (12) relative to said fixed chuck (11)(Col. 6, lines 31-36).
- g. With respect to claim 9, Ooenoki teaches an apparatus further comprising a data storage apparatus (17) operable to collect data from said position sensor (14) as said control module controls said bending module (18)(Col. 6, lines 29-36).
- h. With respect to claim 10, Ooenoki teaches an apparatus wherein said control module (17) is operable to collect data from said position sensor (14) to determine the position of said movable chuck (12) relative to said fixed chuck (11) at a selected time,

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wherein said the sensed position of said movable chuck (12) relative to said fixed chuck (11) allows for a determination of an angle at which the test component is bent (Col. 6, lines 42 – Col. 7, line 7)(Figs. 2a-2e).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ooenoki. Ooenoki teaches an apparatus comprising a control module (17) and a bending module (18) but lacks teaching them substantially integrally formed as a single component. It would have been obvious to a person having ordinary skill in the art to provide the control module and the bending module integrally formed as a single component, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. Howard v. Detroit Stove Works, 150 U.S. 164 (1893). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ooenoki to include the control module and the bending module integrally formed as a single component since it is recognized as an art equivalent (MPEP 2144).

12. Claims 11-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ooenoki in view of Raymond (5,549,007) and further in view of Chebbi (6,651,472).

a. With respect to claims 11, 22, 23 and 24, Ooenoki teaches a control module (17) but lacks explicitly teaching the control module is user programmable. Chebbi teaches a control module (22) which is user programmable (Fig. 7a). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ooenoki to include a user programmable control module as taught by Chebbi in order to allow an operator to input data or information relating to an angle to be attained and/or bending or operating conditions of the apparatus (see Chebbi; Col. 6, lines 14-19).

b. With respect to claim 12, Ooenoki teaches a system comprising a bending module (18) operable to bend a selected test component (13), and a control module (17) operable to control said bending module (18) to select a bending characteristic of the test component (13), wherein at least one of said control module (17) and said bending module (18) are operable to determine an angle of bending at a selected time (Col. 6, line 42 – Col. 7, line 7), wherein at least one of said control module (17) and said bending module (18) are operable to determine when a *springback* occurs in the selected component (13). Ooenoki fails to determine when a crack occurs in the selected component. Raymond teaches an apparatus which determines when a crack occurs in a selected component (35)(Fig. 1). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ooenoki (Ooenoki; Col. 1, lines 16-22) to include the above limitation as taught by Raymond since, by performing additional testing operations on specimens of various thicknesses and materials, it would eliminate the concern of stress corrosion cracking in steel or steel-like specimens (Raymond; Col. 1, lines 14-15).

c. With respect to claim 13, Ooenoki teaches a system wherein said bending module (18) includes a first chuck (11) and a second chuck (12) wherein one of said first chuck (11) and said second chuck (12) is movable relative to the other of said first chuck (11) and said second chuck (12)(Col. 6, lines 18-21).

d. With respect to claim 14, Ooenoki teaches a system wherein said control module (17) controls the movement of at least one of said first chuck (11) and said second chuck (12) relative to said the other of first chuck (11) and said second chuck (12)(Col. 6, lines 31-36).

e. With respect to claims 15, 18 and 19 Ooenoki teaches a system wherein said first chuck (11) and said second chuck (12) are operable to engage the selected test component (13) and bend the selected test component (13) substantially according to a selected sequence provided from said control module (17)(Col. 6, lines 21-23)(Fig. 1).

f. With respect to claims 16 and 17, Ooenoki teaches a system wherein said bending characteristic includes a degree per minute, a step per increment, a delay, number of pauses (Col. 6, lines 46-49)

g. With respect to claim 20, Ooenoki teaches a system further comprising an angle sensor (15) operable to determine the angle at which the selected test specimen (13) is bent at a selected moment in time (Col. 6, lines 26-27).

h. With respect to claim 21 and 24 Ooenoki teaches a system further comprising a force sensor (16) operable to sense a force experienced by said bending module (18) as the selected test specimen (13) is bent by said bending module (18)(Col. 6, lines 27-29)(Fig. 1).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- US2003/0084730 teaches a material testing apparatus.
- 4,573,360 teaches a bending test apparatus.
- 6,799,472 teaches a method and apparatus for measuring material strength.
- 5,277,069 teaches a bending device for testing test pieces.
- 4,233,89 teaches a fatigue testing apparatus.
- 4,691,576 teaches an apparatus for testing the stress resistance of a sample of material.
- 6,553,803 teaches a method and apparatus for determining bending angle of a work piece.
- 4,962,654 teaches a method of bending a test piece.
- 4,408,471 teaches a press brake.
- 4,864,867 teaches a fatigue testing apparatus.
- 4,763,528 teaches a fatigue testing apparatus.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Takisha Miller whose telephone number is (571) 272-2184. The examiner can normally be reached on Monday - Friday (7:00 am - 3:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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PRIMARY EXAMINER